

Northeastern States Field Office
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Milwaukee, Wisconsin 53202-4617
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Finding of No Significant Impact

Environmental Assessment
DOI-BLM-ES-0030-2012-0002-EA
Recreation Management on Selected Islands on
Lake Vermilion, Elbow Lake, and Black Duck Lake,
St. Louis County, Minnesota

The proposed action is for the BLM to implement a series of low-intensity measures to facilitate public use of the Lake Vermilion area islands while protecting sensitive ecological, cultural, and scenic resources.

Based on the analysis of potential environmental impacts contained in the EA of Recreation Management on Selected Islands on Lake Vermilion, Elbow Lake, and Black Duck Lake, St. Louis County, Minnesota, and considering the significance criteria in 40 CFR 1508.27, I have determined that the proposed action will not have significant impacts on the human environment. Therefore, preparation of an environmental impact statement is not required prior to approving and implementing the proposed action.

Authorized Officer:


Mark Storzer, Field Manager
Northeastern States Field Office


Date

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Decision Record

Environmental Assessment
DOI-BLM-ES-0030-2012-0002-EA
***Recreation Management on Selected Islands on
Lake Vermilion, Elbow Lake, and Black Duck Lake,
St. Louis County, Minnesota***

It is my decision to allow the Proposed Action to be implemented as described in the EA of Recreation Management on Selected Islands on Lake Vermilion, Elbow Lake, and Black Duck Lake, St. Louis County, Minnesota. The EA and FONSI analyzed the selected alternative and found no significant impacts. Implementation of this decision will result in the installation and maintenance of primitive latrines, informative signs, and other provisions for public use of recreation areas along with the active revegetation of areas that have been trampled by heavy recreational use.

Authorities: The authority for this decision is contained in the Federal Land Policy and Management Act of 1976.

Compliance and Monitoring: The BLM, in partnership with the Minnesota Department of Natural Resources, the Bois Forte Band of Lake Superior Chippewa, and other organizations and individuals, will monitor the islands affected by this decision in order to determine whether the actions taken are having the intended results of reducing the amounts of human waste left on islands, the areas of bare soil, and frequency of cutting of live trees. Human waste and live tree cutting should be observed to drop significantly in the same season in which they are implemented, and the areas of bare soil should drop significantly within two to three growing seasons. The nature of the activities being implemented allows the BLM and its partners to respond swiftly to problems that arise.

Terms, Conditions, and Stipulations: The Minnesota Department of Natural Resources, through an assistance agreement with the BLM, will replace buckets in latrines and will empty the contents in a safe, lawful manner on shore.

Plan Conformance and Consistency: The selected alternative is in conformance with the *Minnesota Management Framework Plan III* (MFP), approved Sept. 1, 1982, and the *Lake Vermilion Public Islands Coordinated Resource Management Plan* (CRMP), approved Sept. 10, 1993.

Alternatives Considered: The EA considered two alternatives: the No-Action Alternative and the Proposed Action, which is the recommended alternative.

Rationale for Decision: The No-Action Alternative was not selected because it would result in continued use of the islands for restroom breaks, leaving unsanitary human waste and toilet

paper on the islands, and the continued proliferation of trampled soil. The BLM and its partners would continue to pick up litter and human waste several times each summer, and trampled vegetation would lead to increased soil erosion, exposure of cultural artifacts, and degradation of wildlife habitat and scenic quality.

The preferred alternative was developed in consultation with the BLM's partners in northeastern Minnesota, and members of the public have been encouraging the BLM for several years to take such measures to protect the scenic and ecological values of the islands.

Protest/Appeal Language: Any party adversely affected by this decision may appeal within 30 days after receipt of the decision in accordance with the provisions of 43 CFR Parts 4.4.

The notice of appeal must include a statement of reasons or file a separate statement of reasons within 30 days of filing the notice of appeal. The notice of appeal must state if a stay of the decision is being requested and must be filed with the:

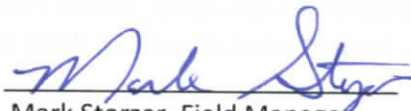
Field Manager
Northeastern States Field Office
626 E. Wisconsin Ave., Suite 200
Milwaukee, WI 53202-4617

A copy of the notice of appeal, statement of reasons, and other documents should be sent to the:

Regional Solicitor
Northeast Region
U.S. Department of the Interior
One Gateway Center, Suite 612
Newton, MA 02458

It is suggested that any notice of appeal be sent certified mail, return receipt requested.

Authorized Officer:


Mark Storzer, Field Manager
Northeastern States Field Office

3/8/12
Date

Attachments: Appendix A - Maps

United States Department of the Interior

Bureau of Land Management

Northeastern States Field Office

LLES003420

Environmental Assessment

NEPA #: DOI-BLM-ES-0030-2012-0002-EA

Recreation Management

**on Selected Islands on Lake Vermilion, Elbow Lake,
and Black Duck Lake, St. Louis County, Minnesota**

Date: February 2012

Type of Action: Recreation Site Management

Location: Fourth Principal Meridian, St. Louis County, Minnesota

- Islands 81, 82, 87, 88, 89, 90, and 91 in Lake Vermilion, T. 62 N., R. 15 W., Secs. 12, 13, 14, and 15, containing 2.8 acres
- Island 204 in Elbow Lake, T. 64 N., R. 18 W., Sec. 22, containing 0.8 acres
- Islands 222 and 223 in Black Duck Lake, T. 66 N., R. 19 W., Secs. 17 and 18, containing 2.7 acres

Project Acreage: 6.3 acres

Bureau of Land Management
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CHAPTER 1 – PURPOSE OF AND NEED FOR ACTION

Purpose of the Proposed Action

The purpose of the proposed action is to facilitate recreational use of the public islands in a way that minimizes threats to wildlife, cultural, and visual resources that may be present on them.

Need for the Proposed Action

The need for the proposed action stems from intensive recreational use of the public islands. Lake Vermilion, Black Duck Lake, and Elbow Lake are intensively used for fishing, leisure boating, and other recreational activities, and boaters frequently stop on the public islands to enjoy themselves or simply for restroom breaks, often leaving behind toilet paper and human waste. These waste products are unsightly and pose the risk of transmitting diseases to other people who use the islands. Also, intensive foot traffic on several of the islands poses the risk of soil compaction and subsequent erosion, which threatens to expose valuable cultural artifacts. Such exposure could lead to looting.

Conformance with BLM Land Use Plans

The following are pertinent to the Proposed Action:

- *Lake Vermilion Public Islands Coordinated Resource Management Plan (CRMP)*, approved Sept. 10, 1993
- *Minnesota Management Framework Plan III (MFP)*, approved Sept. 1, 1982

The proposed action is in conformance with the applicable LUPs because it is specifically provided for in a decision in the *Lake Vermilion CRMP*:

“Provide rudimentary recreational facilities to subtly direct use for protection of island vegetation, wildlife, visual resources and to reduce noise conflicts between public island visitors and adjacent island or mainland visitors or private landowners. Facilities could include: fire rings, boat mooring stakes, clearings for picnics or camping, sanitary facilities and public islands signs” (Alternative 2 Preferred Management, Action 3, Page 53).

Relationship to Statutes, Regulations and Other Plans

The proposed action complies with federal law, state and county water quality regulations, and various county-level plans:

- Shipstead-Newton-Nolan Act of 1930¹ – withdrawal of public lands within an area of northeastern Minnesota, including all of the lakes within the current Decision Area, in order to preserve scenic beauty
- “Zoning Ordinance of St. Louis County, Minnesota”² (adopted February 16, 1993, amended July 1, 2009) – minimum setbacks for structures from waterways

¹ Available in Appendix 1 of the *Lake Vermilion Public Islands CRMP* or at the Northeastern States Field Office

- Portions of St. Louis County Land Use Ordinance 27³ – *Lake Vermilion Land Use Plan* (adopted July 1, 2009, strategies for protecting scenic beauty and water quality on Lake Vermilion), “Houseboat Goals and Policies” (adopted May 26, 1987, suggestion that state and federal governments establish mooring areas for houseboats and other similar craft on dispersed locations throughout Lake Vermilion and other major lakes in the county), *St. Louis County Water Plan* (adopted 1999, guidelines for protecting water resources in St. Louis County)
- *St. Louis County, Minnesota, Comprehensive Water Management Plan*⁴ (adopted September 14, 2010) – a strategy for protecting water resources in the county while providing for recreational, commercial, residential, and other types of land use and development

Decision To Be Made

The BLM will decide whether to provide basic infrastructure to facilitate low-impact recreational use on selected islands.

Scoping and Issues

Rationale for conducting external scoping

The BLM elected to conduct external scoping because the Bois Forte Band of Lake Superior Chippewa and the Minnesota Department of Natural Resources (MDNR) are located in the vicinity of the islands and have a thorough understanding of the management issues pertaining to the islands. External scoping was conducted in a live meeting in Tower, MN, on November 1, 2011, with the curator of the Bois Forte Band Heritage Center and staff from the MDNR.

Issues identified through scoping

1. Will latrines reduce trampling of vegetation, soil compaction, and cultural resource degradation on the islands?
2. Will latrines enhance recreational use of the islands and the lakes?

CHAPTER 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Introduction

Monitors of several public islands on Lake Vermilion and Black Duck Lake often find human waste and toilet paper on the islands. At the same time, users of Elbow Lake and its islands have expressed their desire to make an island more suitable for overnight, small-group camping, which would include the installation of primitive sanitary facilities.

Boaters use the islands for human waste disposal, likely assuming (a) that their waste and toilet paper will biodegrade in a short time and (b) that the cumulative effect of uncontrolled waste disposal on the islands is insignificant. However, the frequency of finding human waste is an indication that this problem needs to be addressed. It is very unlikely that boaters, who are miles away from the nearest

² Ordinance Number 46, available at <http://www.stlouiscountymn.gov/GOVERNMENT/CountyPlanOrdinances.aspx>

³ Available at <http://www.stlouiscountymn.gov/GOVERNMENT/CountyPlanOrdinances/LandUseOrdinance27.aspx>

⁴ Available at <http://www.stlouiscountymn.gov/GOVERNMENT/CountyPlanOrdinances.aspx>

public restrooms, would heed signs banning the use of the islands as restrooms. A likely solution, which is in use in the nearby Boundary Water Canoe Area Wilderness, is to place rustic latrines in locations where they are (a) easy to find, use, and maintain and (b) unobtrusive on the landscape.

Location

The islands on Lake Vermilion (see Appendix A) that comprise the Decision Area are in the east end of the lake, within view of the newly designated Lake Vermilion State Park. The island on Elbow Lake is surrounded by privately-owned islands, and the islands on Black Duck Lake are near other state-owned islands.

Proposed Action

The BLM has developed the proposed action through discussions with its partners, who have expressed concerns regarding trampled and littered areas that result from intense, unregulated recreational use of the islands. The various elements of the proposed action are described in general terms in the *Lake Vermilion Public Islands Coordinated Resource Management Plan*, to which this EA is tiered, and they are described in further detail below and analyzed on a site-specific basis in Chapters 3 and 4.

Latrine Installation

The BLM would place fiberglass, rustic latrines on up to four (4) islands on up to three (3) lakes. The latrine that would be used is a modification of an existing design that is currently used by the U.S. Forest Service on public sites in the BWCAW and on shore lunch sites that are maintained by the Sportsmen's Club of Lake Vermilion (SCLV). This latrine consists of a bottomless box with a hole, a seat, and a lid on the top (see Figure 1). The latrine is anchored into place over a hole in the ground. In the BWCAW,



Figure 1. Wilderness latrine design.

latrines are moved periodically and the holes filled in. Due to the very small size of the BLM islands and the potential for leaching of pathogens into surface waters, the BLM would modify this design by placing a plastic bucket in the latrine, and local partners would periodically check the bucket, replacing it as necessary with an empty bucket and properly disposing of the waste at approved facilities on shore. The latrine could be moved if necessary in order to permit trampled vegetation to recover. A desiccant may be placed in the bucket in order to control odors and reduce the volume of waste. During periodic island monitoring, the BLM's partners would carry desiccant and pour it into

the bucket if the bucket did not need to be emptied.

Restoration of Trampled Sites – Lake Vermilion and Black Duck Lake Only

The BLM and its partners would restore native vegetation to areas of bare soil that have resulted from intense foot traffic and camping. The notable areas to be restored are as follows:

- Lake Vermilion, island #88 – heavily trampled, very little herbaceous vegetation, dead wood, or young trees or shrubs on entire island

- Lake Vermilion, island #81 – one large bare area near middle of island, in which a small area around the fire ring will be preserved as a designated gathering area
- Black Duck Lake, island #'s 222 and 223 – at least four separate campsites, which could be restored on a rotating basis in order to preserve space for camping and day use

Restoration design would be developed in consultation with the MDNR in order to select effective, low-maintenance species, and the MDNR and other partners would maintain plantings by monitoring and watering as necessary.

Camper Registry and Firewood Provision – Elbow and Black Duck Lakes Only

The BLM would initiate no-cost registration for overnight camping on islands on Elbow and Black Duck Lakes. Registration information, which would include users' names, contact information, length of stay, total number in party, and anticipated lake activities, would be used to estimate the volume and types of use of the islands and to create a sense of accountability that may deter inappropriate uses of the islands. A self-registration kiosk for Black Duck Lake would be available at the nearby Elephant Lake Lodge. Discounted or free firewood would be made available upon registration, which would serve as an incentive for users to register. The locations of registration and firewood for Elbow Lake are uncertain, since the lodge that serves the lake is not on the way to the boat launch. One possibility would be to locate both the registry and the firewood on the island and to have a volunteer replenish the small stash of firewood and collect registry data periodically throughout the season. This is a viable option because Elbow Lake has very few non-resident users. Theft of firewood would likely not be a problem, since a small bundle of firewood would not motivate nearby residents to take a trip out to the island.

Signage Enhancement

Guide signs, described as follows, would be placed at highly visible locations on the islands:

1. Locations of latrines – signs would identify the islands that have latrines and would guide boaters to those islands from nearby islands. For example, a sign on island 81 would state that there is a latrine on island 88 and would display, at a minimum, a map, and GPS coordinates, and the distance to the island.
2. Use of latrines – signs at the latrines on Lake Vermilion and Black Duck Lake would remind users not to dispose of garbage in the latrines.
3. Sensitive areas – signs would direct users away from areas on Black Duck Lake and Lake Vermilion undergoing revegetation and would provide interpretive messages about the reasons for and methods of revegetation.
4. Registration – signs at the boat launch and on the public islands on Black Duck and Elbow Lakes only would encourage users to register in order to use the islands.
5. Firewood use – signs at the registration locations would inform users of the availability of firewood; additional signs on the islands on Black Duck Lake would inform people of the importance of leaving standing trees in place on the islands, in case campers did not register before going to the islands.

In order to discourage and prevent vandalism, signs on islands would be installed using long bolts that are welded to metal posts, which are inserted into drilled holes in the exposed bedrock and affixed with expanding caulk or epoxy. The posts may also be modified with cleats to serve as mooring posts, providing further incentive to boaters to protect them.

No-Action

Under the No-Action Alternative, the BLM would not place latrines or signs and would not revegetate trampled areas. Boaters would continue to use the islands for restroom breaks, leaving unsanitary human waste and toilet paper on the islands, and the BLM and its partners would continue to pick up these wastes several times each summer.

Alternative Considered but not Analyzed in Detail – Dispensing Waste Containment Pouches on Islands

The permanent latrine could be replaced with a dispenser on the selected islands for dispensing waste containment pouches that would be used to carry out waste. The waste containment pouch would include, at a minimum, a sealable bag and a small amount of powder that contains enzymes and a gelling compound. The gelling compound renders human waste suitable for landfill disposal. These products are commercially available and are very popular⁵ with backcountry hikers. A dispenser would likely be mounted on a treated lumber pole. Users would be responsible for carrying out their waste and disposing of it properly at a boat landing.

The alternative was not analyzed in detail because the estimated *annual* cost of supplying waste containment pouches exceeds the *one-time* cost of installing latrines. The commercially available products cost more than \$3.00 per pouch. A season's supply would likely cost more than twice the cost of a permanent latrine, and it would be costly to design a dispenser that would dispense just one pouch, at no cost, to a user. Users would likely take extra pouches from the dispenser once they realized how useful it is to have them on hand. Regardless of the outcome of this environmental analysis, the BLM will encourage marinas to consider carrying these products, which would likely contribute to a reduction in waste being left on the islands.

CHAPTER 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

The BLM has administrative authority for 70 islands in Lake Vermilion, two islands on Black Duck Lake, and two islands on Elbow Lake, in northern St. Louis County, Minnesota. The communities of Tower and Soudan lie within one mile of the southeast shore of the Lake Vermilion, and Cook is located about six miles south of the west end of the lake. Another community, Ely, is located 22 miles east of Soudan.

⁵ While the BLM does not endorse a particular brand, commonly available products include RESTOP® and Cleanwaste® WAG BAG®.

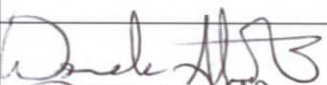


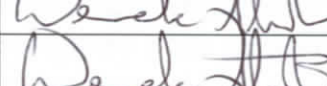
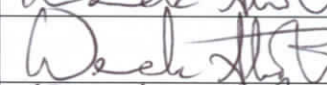

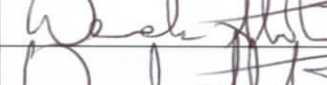
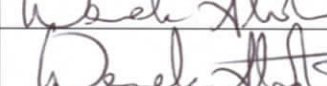
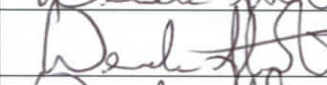
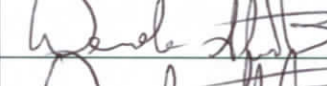
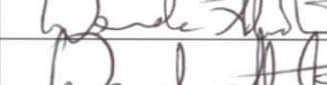
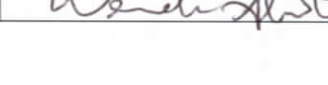

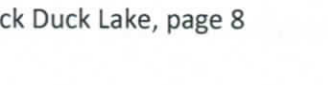
Duluth, Minnesota, is located about 90 miles to the south of Lake Vermilion. These three lakes are surrounded by public lands under federal, state, and county jurisdictions.

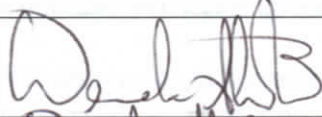
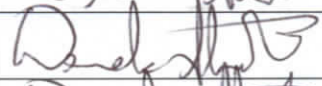
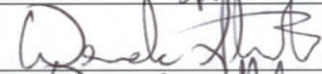
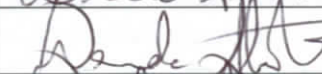
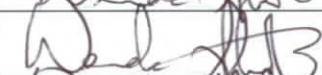
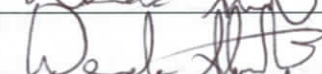
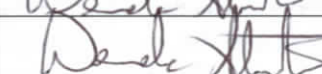
Lake Vermilion has approximately 40,000 surface acres of water and over 1,200 miles of shoreline. The lake is 40 miles long and has 365 islands. Pine, Ely, and Hinsdale Islands, the largest islands on Lake Vermilion with a combined area of several thousand acres, have mixed private, Forest Service, state, and county ownership. Most of the remaining islands on Lake Vermilion are very small, and the BLM islands range in size from 0.01 to 0.54 acre, with a total surface area of seven acres.

Elbow Lake (Minnesota DNR inventory #69074400) is 1,695 acres in size and has approximately ten islands, most of which are privately owned. Black Duck Lake is 1,250 acres in size and has just a few islands. The two largest of these are state-owned islands that are part of the Kabetogama State Forest.

In order to comply with NEPA and the CEQ regulations, the BLM has considered the impacts of the Proposed Action and the No-Action Alternative on the resources listed in Table 1.

Table 1: Technical Review.

Program	Reviewer	Signature	Date
Air Quality	Derek Strohl Natural Resources Specialist		2/14/12
Climate Change	Derek Strohl Natural Resources Specialist		2/14/12
Cultural/Paleontology	Derek Strohl Natural Resources Specialist		2/14/12
Environmental Justice	Derek Strohl Natural Resources Specialist		2/14/12
Farmlands (Prime & Unique)	Derek Strohl Natural Resources Specialist		2/14/12
Fish and Wildlife	Derek Strohl Natural Resources Specialist		2/14/12
Floodplains	Derek Strohl Natural Resources Specialist		2/14/12
Geology/Mineral Resources/Energy Production	Derek Strohl Natural Resources Specialist		2/14/12
Hazardous Wastes	Derek Strohl Natural Resources Specialist		2/14/12
Invasive Species/Noxious Weeds	Derek Strohl Natural Resources Specialist		2/14/12
Native American Religious Concerns	Derek Strohl Natural Resources Specialist		2/14/12
Recreation	Derek Strohl Natural Resources Specialist		2/14/12
Socioeconomics	Derek Strohl Natural Resources Specialist		2/14/12
Soils	Derek Strohl Natural Resources Specialist		2/14/12

Program	Reviewer	Signature	Date
Threatened, Endangered or Candidate Animal Species/Migratory Birds	Derek Strohl Natural Resources Specialist		2/14/12
Vegetation	Derek Strohl Natural Resources Specialist		2/14/12
Visual Resources	Derek Strohl Natural Resources Specialist		2/14/12
Water Resources/Quality (Drinking, Surface & Ground)	Derek Strohl Natural Resources Specialist		2/14/12
Wetlands/Riparian Zones	Derek Strohl Natural Resources Specialist		2/14/12
Wild & Scenic Rivers	Derek Strohl Natural Resources Specialist		2/14/12
Wilderness	Derek Strohl Natural Resources Specialist		2/14/12

Air Quality

The Decision Area has clean air and no air quality non-attainment zones. The proposed action would produce *de-minimis* amounts (less than 100 tons per year) of any pollutants through the placement of structures and signs on the island, and detailed analysis is not warranted.

Climate Change

The proposed action would produce greenhouse gases in *de-minimis* amounts of less than 100 tons per year, and detailed analysis is not warranted.

Cultural Resources

Several of the public islands on Lake Vermilion and Black Duck Lake are known to contain cultural properties. The exact locations of the islands and the cultural sites are not available to the public.

Environmental Justice

The Decision Area does not include any residential areas, nor is any particular portion of the Decision Area frequented by low-income populations.

Farmlands (Prime & Unique)

There are no farmlands in the Decision Area.

Fish and Wildlife

The Decision Area contains world-class game fisheries and habitat for numerous species of mammals, insects, birds, and other types of game and non-game wildlife. Since the edges of the islands are generally steep, they contain, at most, a negligible area of emergent vegetation or shallow water that would provide cover for fish.

Floodplains

There are no floodplains in the Decision Area.

Geology/Mineral Resources/Energy

The islands are off-limits to mineral development as per the Shipstead-Newton-Nolan Act of 1930.

Hazardous Wastes

The islands are not known to contain any hazardous wastes. The project will not introduce any hazardous wastes to the Decision Area, and detailed analysis is not warranted.

Invasive Species

Invasive species have been documented on lakes throughout northern Minnesota. The most common problems are aquatic plants and zebra mussels that are transported by boats and trailers from one lake to another. There are also invasive plant species that have been known to appear on some Lake Vermilion islands, including Asian honeysuckle (*Lonicera* sp.) species. Invasive species have not been documented on the islands in the Decision Area, and detailed analysis is not warranted.

Native American Religious Concerns

Several islands on Lake Vermilion were historically used for spiritual purposes by the Ojibwe. None of these is within the Decision area, and detailed analysis is not warranted.

Recreation

Lake Vermilion is heavily used for recreational fishing and leisure boating. Use of the east end of the lake is expected to increase in years to come as a result of the recent dedication of Lake Vermilion State Park, which will eventually contain campgrounds and a boat launch. Hinsdale Island has 11 boat-in campsites. Lake Vermilion currently has many public restrooms on the water, including six shore lunch sites, at least 14 public launch sites, most of which have public restrooms, and several campsites with public restrooms.

Elbow Lake has four public islands totaling approximately one acre and several large private islands. It has two public boat launches. The boat launches do not have public restrooms. The lake is several miles from public facilities.

Black Duck Lake has one public boat launch with no public restroom. This lake has four BLM islands totaling approximately three acres and one 44-acre island that is part of the Kabetogama State Forest and open for dispersed camping. At least two of the unsurveyed islands on Black Duck Lake are heavily used for overnight camping, and it is not uncommon to find a cluster of tents, stacked firewood, coolers, and litter from beverage and food containers. Makeshift structures for hanging clothes to dry and at least one crude latrine, consisting of a bucket with a seat or a cover, have been observed numerous times on the island.

Firewood is available for purchase at the Elephant Lake Lodge, which is a few miles from Black Duck Lake, along the only road that leads to the boat launch. The lodge used to leave bundled wood out for its cabin renters, but non-renters, including island users, began to steal the firewood. Now, the

firewood is kept in a locked outbuilding at the lodge, and cabin renters as well as other lake users continue to purchase the wood.

While a formal Recreation Opportunity Spectrum (ROS) delineation of these islands has not been completed, all of the public islands likely fall within ROS Class III (Semi-Primitive, Motorized) or Class IV (Modified Natural). These classes are defined by moderate levels of isolation from other people, moderate demands in terms of outdoor skills, and potential for motorized and non-motorized recreation.

Socioeconomics

The small communities around Lake Vermilion depend to a large degree on tourism and recreation for their livelihoods. The lakes are very popular destinations for fishing and leisure trips. The Proposed Action will not measurably affect the local economy, and no detailed analysis is warranted.

Soils

Most of the islands in the Decision Area have thin, loamy to sandy soils. Approximately five of the Lake Vermilion Islands and two of the Black Duck Lake islands have areas of compacted, nearly bare soil that have resulted from concentrated foot traffic. These areas range in size from approximately 50 square feet to approximately 1000 square feet. The worst cases of bare soil are likely on islands #91 on Lake Vermilion and #222 on Black Duck Lake. Island #91 has a bare area of approximately 1000 square feet, which is approximately 5% of the island's total area. Island #222 has approximately 1000 square feet of bare soil, approximately 1% of the island's area.

Threatened, Endangered or Candidate Animal Species/Migratory Birds

Canada lynx (*Lynx canadensis*) and gray wolf (*Canis lupus*) are known to occur in St. Louis County. It is unlikely that they venture out to the islands, given the islands' small size and long distances from shore.

Several migratory bird species have breeding ranges within the Decision Area and use the islands. Bald eagles (*Haliaeetus leucocephalus*) and ospreys (*Pandion haliaetus*) nest in tall trees. Common loons (*Gavia immer*) nest under shrubby cover along shores of protected waters. The Sportsmen's Club of Lake Vermilion conducts an annual loon count on Lake Vermilion and counted 221 and 202 loons in 2010 and 2011, respectively. Double-crested cormorants (*Phalacrocorax auritus*) nest in large colonies on some of the small, rocky Lake Vermilion islands.

Vegetation

The islands have significant canopy coverage of white pine (*Pinus strobus*) and other upland conifers and deciduous species. The shrub strata include dogwood (*Cornus* spp.) and other native species, and the ground vegetation is dominated by wild sarsaparilla (*Aralia nudicaulis*) and Canada Mayflower (*Maianthemum canadense*). For information on areas of trampled vegetation, see **Soils**, above.

Visual Resources

All of the islands in the Decision Area meet, at a minimum, Visual Resources Management Class II requirements.

Water Resources/Quality (Drinking, Surface, and Ground)

The lakes are not used as sources for municipal or private drinking water supplies. Lake Vermilion is mesotrophic. Ample information on water quality in Lake Vermilion can be found at <http://www.pca.state.mn.us/water/clmp/lkwqReadFull.cfm?lakeid=69-0378>. Elbow Lake (more information at <http://www.pca.state.mn.us/water/clmp/lkwqReadFull.cfm?lakeid=69-0744>) is oligotrophic, and Black Duck Lake is eutrophic (more information at <http://www.pca.state.mn.us/water/clmp/lkwqReadFull.cfm?lakeid=69-0842>). Depth to ground water is likely just a few feet in most areas of the islands.

Wetlands/Riparian Zones

There are no wetlands or riparian zones in the Decision Area.

Wild and Scenic Rivers

There are no Wild and Scenic Rivers in the Decision Area.

Wilderness

There are no designated Wilderness areas in the Decision Area.

CHAPTER 4 – ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Introduction

This chapter assesses potential consequences associated with direct, indirect, and cumulative effects of the Proposed Action and alternatives. Resources that are noted in Chapter 3 to be absent or unaffected are not repeated in this section.

Cultural Resources, Soil, and Vegetation

These resources are combined because the same effects pertain to all. Placing latrines is expected to reduce the vulnerability of cultural artifacts to erosion, discovery, and unauthorized collection. By giving the BLM and its partners increased influence on foot traffic, the BLM and its partners will be able to select locations that are away from known or likely locations of artifacts, and the BLM and its partners will be able to move the latrines if use results in erosion that may threaten cultural resources. This is expected to result in a reduction of approximately 10% in the area of trampled vegetation and compacted, erosion-prone soil. The active revegetation of trampled, bare areas is expected to reduce the total size of these areas by more than 50%.

The No-Action alternative would continue to permit boaters to use the islands as uncontrolled latrines, allowing boaters to determine where and how they dispose of their waste. This would likely result in the BLM and its partners being unable to influence soil compaction and plant recovery, resulting in continued, increased erosion and exposure of cultural artifacts.

Further effects to woody vegetation are described in the next section, since they directly impact nesting habitat for migratory birds.

Threatened, Endangered or Candidate Animal Species/Migratory Birds

The steps comprising the Proposed Action are expected to result in an increase in suitable nesting habitat for common loons on island 88 on Lake Vermilion, since revegetation will reestablish shrubby cover along the island's edges. Since loons require nesting territories of several dozen acres, it is expected that restoring the vegetative cover on a small island will result in the addition of no more than one loon nest, and this addition is not expected to occur for at least five years.

Steps taken to create a sense of accountability and discourage cutting trees for firewood are expected to slow the removal of live trees. These small trees, which are often cut by users for firewood, would otherwise grow up to replace the existing mature pines, which provide nesting habitat for bald eagles and ospreys. A conservative estimate of the number of live pine trees that are cut would be between two and ten trees per year per island.

The No-Action Alternative is expected to result in a gradual decrease in the amount of suitable nesting habitat for common loons, bald eagles, and ospreys. The continued loss of shrubby cover, resulting from unregulated access to the islands, is expected to result in the decrease in loon nesting habitat, and the continued removal of young pine trees is expected to result in reduced recruitment of mature nesting trees for eagles and ospreys.

Recreation

The proposed action will add one public, rustic restroom facility to Lake Vermilion, one to Black Duck Lake, and one to Elbow Lake. Neither the proposed action nor the No-Action Alternative will change the ROS class of any of the islands.

Visual Resources Management

Visual Resources Management Class II requirements allow for low-level modifications, such as latrines and signs. Neither the proposed action nor the No-Action Alternative would modify the islands' VRM class. Rather, the proposed action would result in the installation of up to four latrines and fewer than 15 signs on islands, at boat landings, and at off-site registration areas. These signs would conform to the BLM Sign Guidebook⁶, which directs that signs not create unsightly disturbances in the visual character of a natural recreation area. Latrines would be painted colors that blend into the vegetation so as to be invisible from a distance, leaving the visual character of the islands undisturbed as viewed from the lakes.

Site revegetation will enhance the visual characteristics of the islands. Within a period of one growing season to several years, revegetation would reduce the amount of bare, compacted soil on the islands. Over a period of several years to decades, the establishment of trees and shrubs would create screening around the islands and add to the mature tree canopy.

⁶ Available online at http://www.blm.gov/wy/st/en/Sign_Center.html.

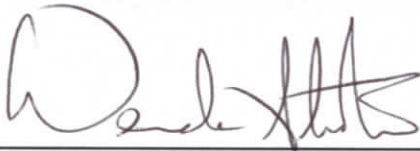
Persons, Groups, and Agencies Consulted

List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Bill Latady	Deputy Tribal Historic Preservation Officer	The Bois Forte Band and the MDNR were involved in developing the proposed action. They and the BLM share the common objective of protecting the ecological and cultural resources present on the islands.
Jim Essig, Guy Lunz, John Voges – MDNR	Responsible for administering Lake Vermilion State Park and other state-owned lands affected by proposed action	

List of Preparers

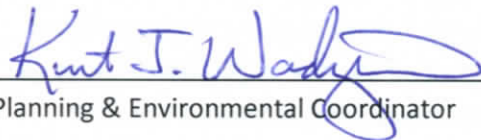
Name	Title	Responsible for the Following Section(s) of this Document
Derek Strohl, BLM	Natural Resources Specialist	All sections except Cultural Resources and Native American Religious Concerns



Preparer

Feb. 14, 2012

Date



Planning & Environmental Coordinator

FEB. 14, 2012

Date



AFM, Natural Resources

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Date

Appendix A - Maps

Figure 1. Proposed recreation management activities on Lake Vermilion islands.

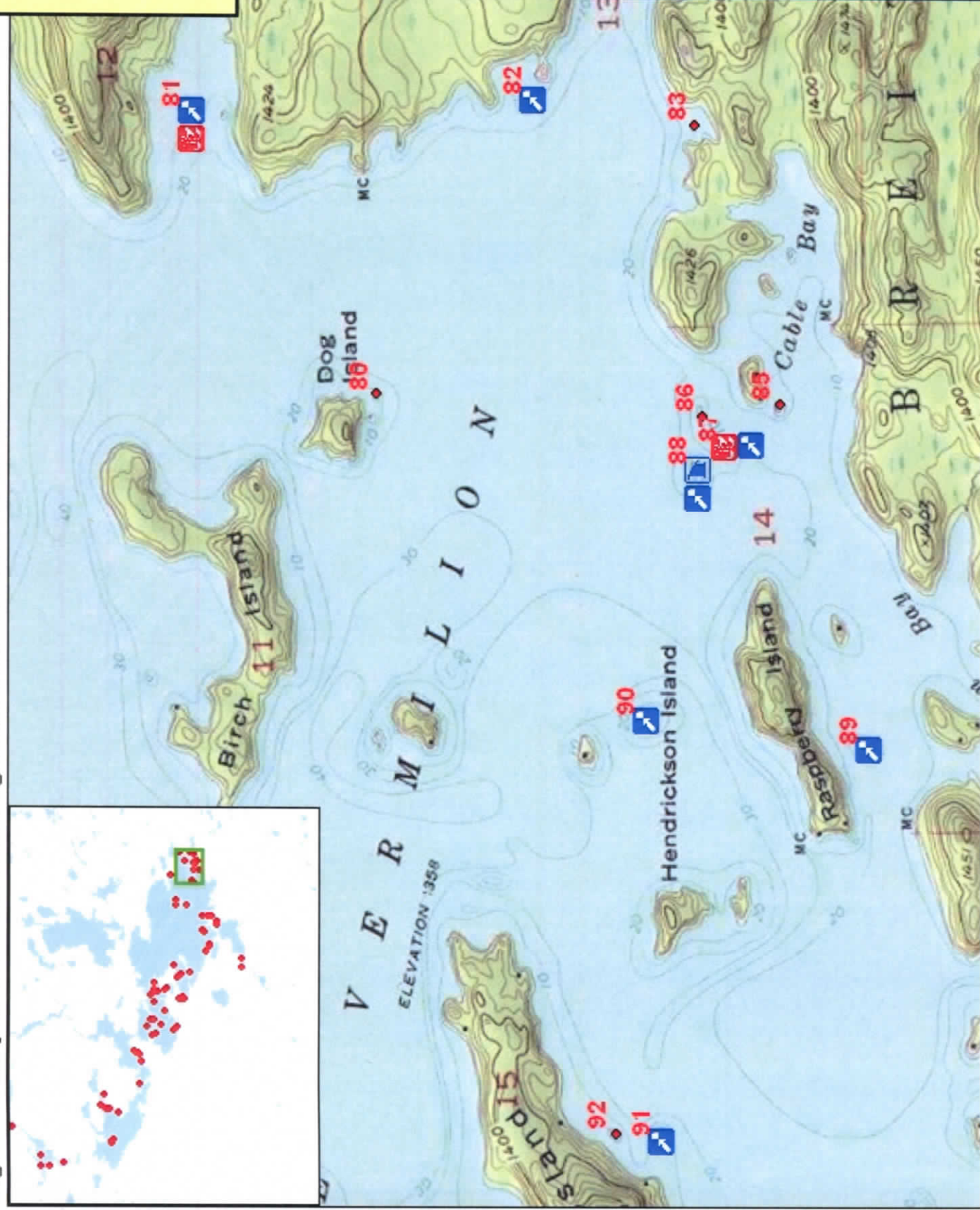


Figure 2. Proposed recreation management activities on Elbow Lake islands.

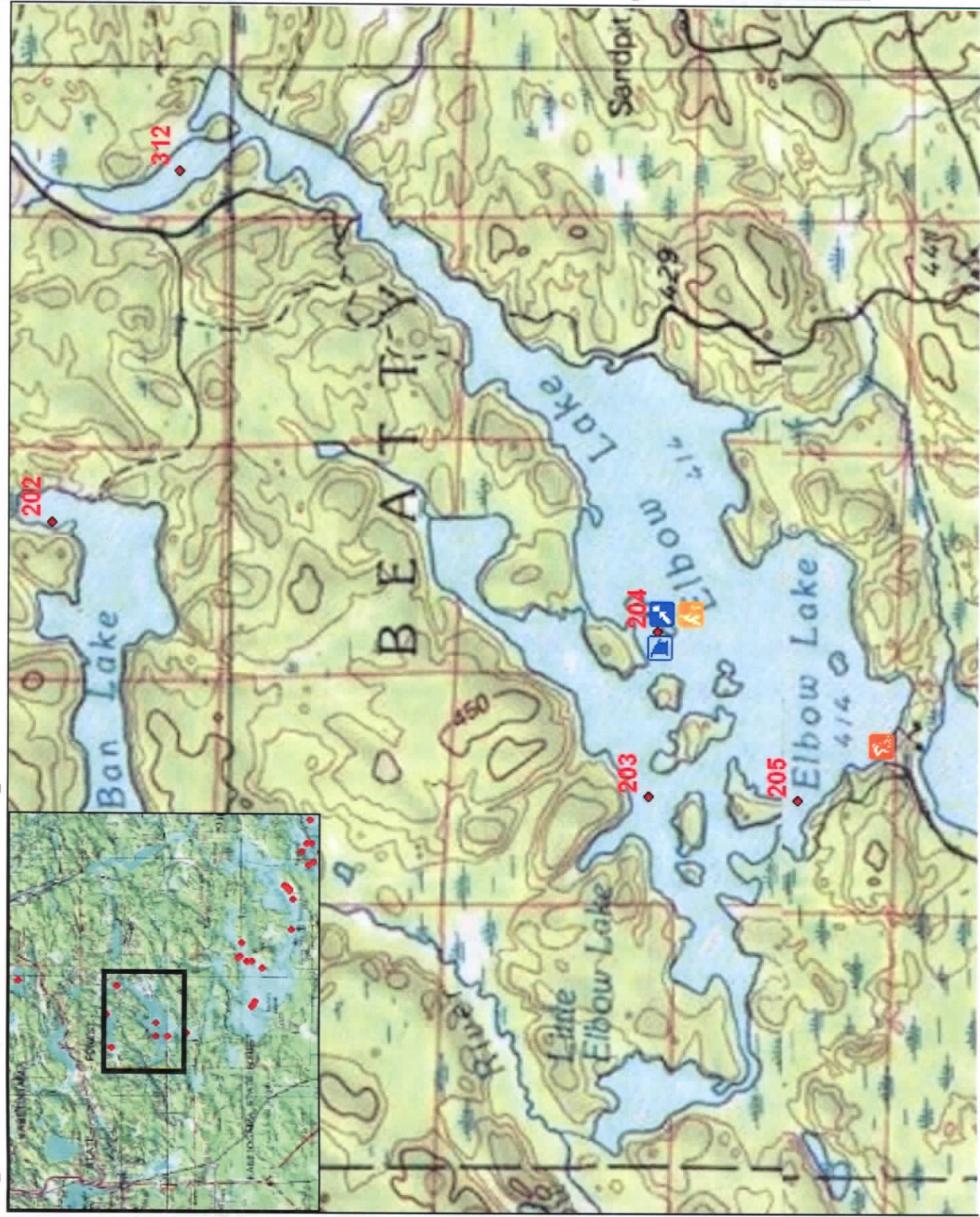


Figure 3. Proposed recreation management activities on Black Duck Lake islands.

